CORPORATE PLANNING SYSTEMS FOR THE POWER UTILITIES INDUSTRY

INPUT

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OPPORTUNITIES FOR COMPUTER ASSISTED FINANCIAL AND CORPORATE PLANNING IN THE POWER UTILITY INDUSTRY

Prepared For:

KEITH FEIBUSCH AND COMPANY

AUGUST 1979

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I INTRODUCTION

I INTRODUCTION

- Program authorization to conduct this study was obtained from Keith Feibusch and Company on June 5, 1979.

- The user interview questionnaire was approved at a meeting held at Keith Feibusch and Company on June 18, 1979.

- Interviews were conducted between June 25 and July 13, 1979. The interview program consisted of ten user (all on-site) and six vendor telephone interviews.

- The user interviews included the responsible financial officer and planning officer in each company. Financial officers of two utility holding companies were interviewed.

- A presentation of the preliminary findings was made at Keith Feibusch and Company on July 19, 1979.

- Respondents were generally cooperative and were most interested in receiving an Executive Summary of the research results which was promised early in the interview.

- The interviews were identified as lasting from 30-45 minutes. The interviews ranged from 60 minutes to nearly two hours.

- Some respondents were advised that they would not be identified by name in any published report. Because of the small number of utilities, Appendix A (Interview Sample) should be treated with sensitivity.

- Forecasts found in this report are based on current dollars, and include an allowance of 6% for inflation. The difference between 6% and the annual increase in the Consumer Price Index (CPI) is assumed offset by technology.

- Definition of terms used throughout this report are found in Appendix B.

- User and vendor questionnaires are found in Appendix C.

II EXECUTIVE SUMMARY

II EXECUTIVE SUMMARY

A. OVERVIEW

- The current climate is favorable for offering interactive financial/corporate planning computer services to public utilities.

- Public utilities in all size catagories are becoming more heavily involved both in developing supporting data and making better planning decisions, particularly in the long range.

- A number of external factors including governmental, financial and regulatory all tend to force increased use of computer aided planning services. Recent and planned federal energy legislation is expected to add even more to demands on public power utilities for better and more comprehensive corporate long-range planning.

- Only one vendor, Planmetrics, has high visibility in the financial planning segment of the marketplace. A number of other small vendors are beginning to offer services in this emerging market segment of corporate strategic planning.

- Research covered in this report is concerned with privately held public gas and electric utilities. There are a number of other markets such as power cooperatives and municipals, and federally sponsored power utilities which are also candidates for computer aided financial/corporate planning services. However, they are beyond the scope of this study.

- For purposes of market survey and analysis, privately held public utilities have been divided into the following size categories:

SIZE CATEGORY	ANNUAL REVENUES
Very Large (VL)	> $ 800 Million
Large (L)	$400-800 Million
Medium (M)	$100-400 Million
Small (S)	< $ 100 Million

B. RECOMMENDATIONS

- INPUT recommends that Keith Feibusch and Company (KFC) proceed to enter the market for computer assisted financial/corporate planning services to public power utilities.

- Market entry should be concentrated in the area of offering corporate strategic long-range planning services.

- Keith Feibusch and Company should not try to directly compete with Planmetrics, the leading vendor of financial budgeting and short-range planning services to larger public power utilities.

- Market entry should be planned in the near future before one or more of the firms offering corporate planning services has opportunity to greatly expand market presence and share.

- The most rapid way of market entry is for Keith Feibusch to obtain corporate strategic planning capability to complement existing marketing and technical expertise through acquisition.

- INPUT has identified four companies which it recommends Keith Feibusch consider for acquisition.

- Management Analysis Corporation (MAC) has a combination of people who have industry recognition, have developed a good financial/corporate software modeling system, are currently involved in corporate strategic planning services with several public power utilities, and have good user press. Located in San Diego, MAC is well located for KFC corporate and market planning. MAC appears more market oriented than any of the other companies interviewed.

- Economic Sciences Corproation (ESC) has the professional staff, a good corporate modeling system (EMS) oriented toward strategic planning under conditions of uncertainty, and is currently involved with public power utilities. ESC has the advantage of an existing relationship with a timesharing vendor, National CSS, a vendor who is offering IBM plug compatible minicomputers as user site hardware systems. ESC is located in Berkeley, close to KFC corporate headquarters.

- Decision Focus, Incorporated (DFI) has a nationally recognized professional staff with wide analytic capabilty to power utilities has developed a modeling system (GEM) well oriented toward corporate strategic planning, and is well thought of by EPRI. A specialist in energy related matters, DFI is currently involved in corporate strategic planning. Located in Palo Alto, near EPRI, DFI is well located for coordinated market entry.

- Execucom Systems Corporation focuses its attention on top corporate executives in larger corporations. Execucom has developed a powerful corporate planning modeling system (IFPS) which operates on a wide variety of mainframes and minis, including the CDC Cybernet timesharing systems.

Execucom has good marketing approaches to reach senior corporate executives, and a highly qualified technical staff. Although not surfacing as a leading vendor among the respondents surveyed, Execucom would complement KFC's marketing and technical capabilities. Located in Dallas, acquisition of Execucom would offer Keith Feibusch entry into a major power utility and energy related marketplace.

- Market entry should be based on offering a combination of corporate planning/consulting services for:
    - Very large and large utilities on user site IBM plug compatible minicomputers with data base access to utility's host computer and to vendors' Remote Computer Services (RCS) networks.
    - Medium and small utilities on an RCS basis.
- Corporate planning systems should be developed on a highly modular basis. Each module should be structured such that simplifying assumptions can be replaced with an expanded level of sophistication as corporate executives gain confidence in using the system to aid their decision making. The approach should be to "keep it simple" for introducing corporate planning in small utilities, adding levels of sophistication in dealing with larger ones.
- Marketing should be targeted at the highest executive level. Involvement of the CEO and the Executive Planning Committee through presentations, through sponsoring Corporate Planning Seminars and through participating in trade association planning group meetings increases industry visibility.

C. SUMMARY OF RESULTS

- There are a static number, just over 210, of privately held public power utilities, whose 1978 annual revenues of over $62 billion are growing at a five year average annual growth rate (AAGR) of 18%.

- Power utilities spent over $40 million in 1978 for financial/corporate computer planning services. They are expected to increase computer services expenditures at a five year AAGR of 20%, reaching over $100 million in 1984.

- Currently computer services expenditures are divided among remote computing services (RCS), 39%, software products, 34%, and professional services, 27%.

- Above average (16%) growth rate is attributable to external market influences, major ones of which are:

    - Review requirements of Public Utility Commission rate cases.

    - Federal Government requirements from DOE, NRA, and now PURPA.

    - Rapid inflation in the cost of goods and services.

    - Instability in long-term capital markets.

    - Escalating cost of all forms of energy.

- Most planning executives felt that the current planning process was adequate for budgeting and short-range planning, but half of the executives interviewed felt that current computer models were too cumbersome, and non-responsive for long-range strategic planning.

- Half of the respondents interviewed are developing or are planning to develop simplified "aggregate" corporate long-range strategic planning models.

- Nine of ten power utilities interviewed used financial planning models, five in-house and four through a RCS (Tymshare) vendor.

- All respondents using RCS services wanted to bring the financial planning system in-house, three of these wanted to shift to doing financial/corporate planning on a minicomputer.

- Respondents' preferred method of financial/corporate planning service delivery was user site minicomputer, 60%; and in-house host system 40%; with no respondent favoring RCS.

- Respondents were interested in professional consulting services primarily for support (90%) and for installation (60%).

- Respondents wanted DBMS systems to interface with corporate planning systems as a means of establishing and maintaining a common set of parameters and assumptions between forecasting and corporate planning models.

- Nine public utilities were using RCS vendors, primarily Data Resources, Inc. (DRI), to access interest rates, national economic indicators, energy costs, demographics, and weather data for economic and load forecasting.

- Respondents felt that over time corporate strategic models would be making greater direct access to both national and regional data bases.

- Corporate financial or corporate planning officers are the points of contact in offering financial/corporate planning services, but either the CEO or the Executive Planning Committee are the key decision makers.

- Two types of vendors operate in the markeplace for financial/corporate planning services to public utilities.

  - Vendors offering financial budgeting and short-range financial planning services. Planmetrics, with annual revenue of $10 million, is by far the leading vendor. Other vendors are Arthur Andersen, Power Technology and TRACE, Inc.

  - Vendors offering corporate planning services primarily for long-range strategic planning. There is no leading vendor in this emerging marketplace. Vendors operating in this market segment are Management Analysis Corporation, Economic Sciences Corporation, and Pugh Roberts and Company.

III SURVEY RESULTS

III SURVEY RESULTS

A. MARKET STRUCTURE

- There are 213 Class A and B privately owned (common stock) public power utilities in the U.S. The number has not appreciably changed over the last seven years. Their distribution by size in terms of revenues is shown in Exhibit III-1.

- Although the total number of power utilities has not changed, the number of very large utilities is increasing at an average annual growth rate of 10%, whereas the number of small utilities is actually decreasing. This is due to a number of factors, key of which are formation of utility holding companies, inflation, rapidly escalating fuel costs, and acquisition of smaller privately held or publicly owned (municipals) utilities.

- Total 1977 power utility revenues were over $62 billion, 62% of which are earned by the very large and large utilities, which represent 17% of the total number of utilities.

- Spurred on by growth in demand, inflation and escalating fuel costs, power utility revenues have been growing at a seven year AAGR of 18%.

- In 1976 there were another 2,200 publicly owned (municipals, cooperatives, etc.) utilities with individual revenues in excess of $250,000. Of the total $6.4

EXHIBIT III-1

MARKET STRUCTURE OF PRIVATELY OWNED PUBLIC POWER UTILITIES BY SIZE IN 1977

SIZE	ANNUAL REVENUES ($ MILLION)	NUMBER	AAGR %	TOTAL REVENUES ($ BILLION)	AAGR %
VERY LARGE (VL)	> $800	18	10%	$25.2	21%
LARGE (L)	$400-800	22	4	13.2	18
MEDIUM (M)	$100-400	75	1	18.8	17
SMALL (S)	$100	98	-	4.9	10
TOTAL		213	-	$62.1	18%

billion in annual revenues, approximately 500 utilities had revenues exceeding $5 million and represented 72% of total revenues.

- Finally there are less than a dozen large federal wholesale power utilities (Bonneville, TVA, etc.) which form part of the market.

- Although federal power utilities and some municipals and cooperatives appear to be potential candidates for financial/corporate planning services, they were not included in the market research covered by this study.

B. MARKET ANALYSIS

- The market for financial/corporate planning services which is currently over $40 million will rapidly increase at a 20% AAGR and will exceed $100 million by 1983.

- While services to very large and large utilities are increasing the most rapidly (Exhibit III-2), the major portion (64%) in 1983 will still be at the lower end (medium to small) of the market.

- Very large and large utilities will tend to shift services in-house unless the trend is counteracted by the RCS vendors with user site minicomputer systems.

- Remote Computing Services, currently the major service type will (as shown in Exhibit III-3) give way to software products as utilities shift to more cost/effective strategic planning systems.

- Professional Services, an important segment (27%) of this market, are used for installation, support and refinement of customized financial/corporate planning systems.

EXHIBIT III-2

FORECAST OF FINANCIAL/CORPORATE PLANNING SERVICES BY POWER UTILITY SIZE

1978 - 1983

UTILITY SIZE	REVENUES		
	1978 ($ MILLION)	1983 ($ MILLION)	AAGR (%)
VERY LARGE	$ 4	$ 14	28%
LARGE	7	20	23
MEDIUM	17	43	20
SMALL	13	25	14
TOTAL	$41	$102	20%

EXHIBIT III-3

FORECAST OF FINANCIAL/CORPORATE PLANNING SERVICES BY SERVICE TYPE

1978 - 1983

SERVICE TYPE	REVENUES		
	1978 ($ MILLION)	1983 ($ MILLION)	AAGR (%)
REMOTE COMPUTING SERVICES	$16	$ 37	20%
SOFTWARE PRODUCTS	14	39	23
PROFESSIONAL SERVICES	11	26	19
TOTAL	$41	$102	20%

C. INFLUENCING FACTORS

- All of the external factors influencing the financial/corporate planning process tend to increase greatly the use of computer-aided planning systems for power utilities.

1. REGULATORY

- Respondents continually referred to the increased use of financial/corporate planning systems to prepare, defend and revise, if possible during rate hearings, data for submission to state public utility commissions.

- Some executives indicated that selected PUC's could use modeling/consulting services, both to review submissions and to make parallel studies of load demand, distribution, and other forecasted inputs to the planning process.

- Executives reported increased use of financial/corporate planning systems to support siting hearings both for power plants and transmission systems.

2. GOVERNMENTAL

- Most executives gave a glowing list of governmental agencies and regulations that accelerate the almost daily use of financial/corporate planning systems.

- Some executives estimated that up to half the computer runs and studies were in response to some new regulation or government initiated request.

- The Nuclear Regulatory Agency, the Environmental Protection Agency, The SEC, and the FERC all rate high as factors which increase the use of financial/corporate planning systems.

- Executives indicate that the net effect of governmental requirements is to lengthen significantly the planning cycle, introduce greater uncertainty, hence require more computer aided analysis/planning.

3. CAPITAL MARKETS

- Planning executives report an increasing need to develop comprehensive backup, including contigency planning to convince financial analysts of the ability to support bond ratings and return on new equity investments in capital markets.

- Up until the last decade utilities financed their operations on the traditional mix of common and preferred stock and first mortgage bonds. Utilities are now using financial/corporate planning systems to develop data to permit operation in such areas as Eurodollar markets, buy/lease back arrangements, and new equipment trusts.

- Because of the increasingly distant planning horizon, power utility executives are forced to accomplish their planning under conditions of uncertainty. This has increased their consideration of stategic planning models.

- Rapidly rising and fluctuating interest rates require more careful planning and timing of capital market entry by power utilities.

- Respondents felt that the data requirements of the last energy act will significantly increase the use of financial/corporate planning systems particularly for the smaller utilities.

4. INFLATION

- Inflation adds another dimension to the complexity of long-range financial/stategic planning. Inflation adds great uncertainty in material and labor costs for both operations and construction. Some respondents felt that strategic planning under conditions of inflation, hence uncertainty, has more than doubled their use of financial/corporate planning systems.

- Respondents report that inflation erodes capital markets, increases interest rates, skews business cycles, and affects consumer demand.

5. ENERGY

- The rapidly rising costs of oil, followed by gas, then coal and nuclear require more frequent and careful planning on the part of planning executives. Increased use of financial/corporate planning systems are needed for rate relief, resource planning, and long-range energy supply development.

- Respondents' typical comments on factors influencing use of financial/corporate planning systems are found in Exhibit III-4.

D. EXECUTIVE ATTITUDES

I. PLANNING ORGANIZATIONS

- Two types of planning approaches come from the interview sample. One type had more centralized planning at the corporate level with large planning organizations (100 or more) accomplishing most if not all of the corporate planning within the headquarter organization.

- The second approach was that of decentralized planning whereby a small corporate staff coordinates the planning at functional levels, obtaining inputs

EXHIBIT III-4

RESPONDENTS' COMMENTS ON FACTORS AFFECTING USE OF FINANCIAL/CORPORATE PLANNING SYSTEMS

"PLANNING SYSTEMS HAVE SHOWN US THAT WE HAVE USED UP THE EFFICIENCIES OF SCALE IN PLANT CONSTRUCTION. EACH NEW GENERATION PLANT INCREASES THE COST OF ELECTRICITY."

"IF GOVERNMENT REGULATION DOESN'T EASE OFF THE INDUSTRY WILL HAVE TO SHIFT TO A DEFENSIVE STRATEGY WHICH WILL RESULT IN INSUFFICIENT POWER TO MEET DEMAND."

"WE HAVE TO SPEND A GOOD DEAL OF EFFORT TO SHOW HOW A UTILITY WILL BE AN INVESTMENT OPPORTUNITY - THIS USED TO BE TAKEN FOR GRANTED."

"THERE ARE ANY NUMBER OF FACTORS WHICH OCCUR ON A FREQUENT BASIS THAT REQUIRE RAPID RESPONSE BY MANAGEMENT. MANAGEMENT WANTS TO KNOW, "WHAT IF..."

"WE ARE NOW INVOLVED IN RESPONDING TO POLITICAL PROCESSES IN THIS NUCLEAR THING. WE NEED TO CONSIDER STRATEGIC WAYS TO RESPOND TO THE UNCERTAINTY RAISED BY SUCH PROCESSES."

and forecasts to combine into a corporate plan; mostly financial, sometime corporate, and rarely strategic.

- All of the utilities had a senior financial officer, most of them had a vice president of corporate planning, but only a few had senior officers for strategic planning (see Exhibit III-5).

- Utility holding companies had highly centralized planning organizations which accomplished both short and long-range planning.

- Where long-range planning had not received much management attention, the corporate or financial model was developed and resides in financial planning under the Financial V.P. This is true for 70% of the respondents.

- There appears to be a gradual shift to more centralized planning organizations as utilities are forced to more rapidly respond to external conditions. Some executives decry this trend and hope that providing models operating on a common data base will permit greater involvement in the planning process at the functional level.

2. CURRENT PLANNING PROCESS

- Executive assessments varied widely as to the adequacy of the current planning process.

- The major portion (80%) of executives felt that the current planning process was adequate for operating budget planning (one to two years).

- Most (60%) felt that the present process with some improvement was probably adequate for short-range planning. (two to five years).

- Many (50%) executives felt that the current process was too cumbersome and fell short of accomplishing long-range strategic planning.

EXHIBIT III-5

RESPONDENTS' EXECUTIVE PROFILE

TITLE	RESPONDENTS
VICE PRESIDENT, FINANCE	6
VICE PRESIDENT, CORPORATE PLANNING	5
VICE PRESIDENT, STRATEGIC PLANNING	2
DIRECTOR/MANAGER, FINANCIAL PLANNING	6
DIRECTOR/MANAGER, CORPORATE PLANNING	1
DIRECTOR/MANAGER, STRATEGIC PLANNING	1
DIRECTOR, SALES AND RATE FORECASTING	2
MANAGER, BUDGETS AND ECONOMICS	1

- Executives felt that the financial planning process concerns itself primarily with the two year budgeting process and with raising capital for a five year construction horizon.

- The corporate planning process centers on planning with a five year horizon including load forecasting, generation planning, and generation plant and consumer power transmission construction.

- The evolving strategic planning process involves long-range planning (5-20 years) and considers basic issues such as fuel costs, inflation, and system peak capacity under conditions of increasing uncertainty.

- Typical respondent comments on the current planning process are found in Exhibit III-6.

3. PENDING PLANNING PROCESS CHANGES

- Executives felt that the current financial or corporate model required too much input, took too long to run, and resulted in only one output case per set of input assumptions. Long-range planning was accomplished by establishing a base scenario and then varying selected conditions one at a time until the results looked "reasonable."

- Current market conditions require more than one set of values to adequately reflect uncertainty in 5-20 year forecasts. Some (30%) executives felt a combination of using the detailed financial or corporate model in conjunction with a simpler "Macro" model which had greater flexibility, quicker turn around time, based on econometric or statistical forecasting techniques reflecting conditions of uncertainty was the way to go.

- Typical respondent comments concerning planned changes to the corporate planning process are found in Exhibit III-7.

EXHIBIT III-6

RESPONDENTS' COMMENTS ON THE CURRENT PLANNING PROCESS

"WE USE DECENTRALIZED PLANNING. THE CURRENT MODEL IS TOO CUMBERSOME FOR RAPID RESPONSE BUT DOES PREPARE GOOD DETAILED BUDGETS."

"WE HAVE SHIFTED IN THE PAST YEARS TO A CAPITAL RATIONING CONCEPT. WE WILL LIVE WITHIN A SET RATE RANGE. WE CAN'T ASK THAT RATES BE RAISED AT WILL ANY LONGER."

"OUR PLANNING PROCESS WORKS WELL FOR BUDGETING AND SHORT RANGE PLANNING BUT IS NOT VERY EFFECTIVE FOR LONG RANGE PLANNING."

"THE MICRO MODEL IS STRICTLY DETERMINISTIC. IT WORKS WELL IN THE SHORT RUN BUT NOT FOR LONG RANGE PLANNING."

"OUR PLANNING PROCESS WORKS A LOT BETTER THAN IT DID 5 YEARS AGO BEFORE WE HAD COMPUTER MODELS BUT IT HAS A LONG WAY TO GO."

"WE ARE IN THE PROCESS OF RE-EXAMINING HOW WE DO BUSINESS AND WILL DEVELOP BETTER WAYS OF DEALING WITH LONG-RANGE PLANNING."

"THE CURRENT PROCESS WORKS O.K. BUT IT'S TOO CUMBERSOME AND DOES LITTLE TO ACCOUNT FOR UNCERTAINTY."

EXHIBIT III-7

RESPONDENTS' COMMENTS CONCERNING PLANNED CHANGES TO THE CORPORATE PLANNING PROCESS

"WE WANT TO DEVELOP A MODEL THAT IS MORE RESPONSIVE TO OPERATING DEPARTMENT HEADS. WE WANT TO BE ABLE TO PUT A RATE CASE TOGETHER IN A FEW WEEKS AND UPDATE IT WHILE THE RATE CASE IS IN PROGRESS."

"WE ARE DEVELOPING A MACRO MODEL TO GIVE MORE FLEXIBILITY IN "WHAT IF" CORPORATE ANALYSIS. THE CORPORATE MODEL WILL USE PROBABILISTIC TECHNIQUES."

"WE ARE WORKING TOWARD AN INTEGRATED CORPORATE MODEL FOR IMPLEMENTATION IN THE 1980-1981 TIMEFRAME. THE MODEL WILL APPROACH THE CORPORATE PLANNING PROCESS AS OPERATING UNDER CONDITIONS OF UNCERTAINTY."

"WE ARE DEVELOPING A CORPORATE STRATEGIC MODEL IN APL. THE MODEL WILL HAVE 400 OR SO VARIABLES AND WILL BE COMPLETELY INTERACTIVE."

"OUR PLANNING IS MORE A REACTION TO SOME IMPORTANT NEAR TERM DEVELOPMENT THAN IT IS TOWARD LOOKING AT THE LONG TERM HORIZON. HOPEFULLY WE CAN MOVE IN THAT DIRECTION."

"WE ARE GOING TO DEVELOP A SPECIALIZED LONG RANGE PLANNING MODEL. WE WILL PROBABLY SELECT A SEPARATE SOFTWARE PACKAGE FOR BUDGETING."

4. DECISION PROCESS IN PLANNING SERVICE SELECTION

a. Point of Contact

- Executives report that the point of contact has shifted somewhat since financial planning models were introduced four or more years ago. At that time a typical point of contact was the controller or director of budget planning. Today the point of contact is the Vice President of Finance or more likely the Vice President of Strategic Planning.

- Executive response on point of contact is tabulated in Exhibit III-8.

b. Key Decision Maker

- Respondents reported that the selection of a computer aided planning system would require the review and approval of the Chief Executive Officer or the executive planning committee. For this reason many respondents recommended that a vendor offering new financial or strategic planning services attempt to make initial contact at the CEO level.

c. Decision Process

- Executives reported that the decision process involves letter requests, presentations, review by the senior planning committee, formal proposals and contract negotiations.

- Executives favored vendors who would work on-site with user personnel in joint implementation efforts.

- Good press from other utility customers is a definite plus in vendor selection.

- Executive attendance at planning seminars helps.

EXHIBIT III-8

RESPONDENTS' DESIGNATION OF KEY EXECUTIVE INVOLVEMENT IN CORPORATE PLANNING SYSTEMS SELECTION

POINT OF CONTACT	NUMBER OF RESPONDENTS
VICE PRESIDENT, CORPORATE/ STRATEGIC PLANNING	4
VICE PRESIDENT, FINANCE	4
TREASURER	1
ASSISTANT TREASURER	1
KEY DECISION MAKER	**NUMBER OF RESPONDENTS**
CHIEF OPERATING OFFICER	5
VICE PRESIDENT, RESOURCE PLANNING	1
FINANCIAL VICE PRESIDENT	3
TREASURER	1

- Typical respondent comments on the decision process are presented in Exhibit III-9.

5. SELECTION FEATURES

- Respondents were asked to separately assess on an equivalent scale of 100 (most important) to 1 (least important) factors they would consider important in selecting a financial/corporate planning system/service. Their assessment is shown in Exhibit III-10.

- The fact that neither software package purchase price or processing cost are key factors indicates that there is price elasticity in the markeplace.

6. FUTURE SYSTEMS PLANS

- Respondents had some plans to update and improve their financial planning models. They wanted to improve the interface between the financial model and other models used for forecasting such things as revenue load generation, scheduling and plant construction.

- Some respondents (30%) were developing corporate strategic planning models. Models have less that 200 inputs, have flexible "what if" and goal seeking, short turn around time, and give ranges of output values to better aid top executives in better strategic planning.

- Typical respondent comments on future plans are found in Exhibit III-11.

7. PLANNING ASSUMPTIONS AND PARAMETERS

- Virtually all of the respondents stressed both the importance of and the difficulty in having corporate planning assumptions and parameters common between all models used.

EXHIBIT III-9

RESPONDENTS' COMMENTS ON DECISION PROCESS IN SELECTING FINANCIAL/CORPORATE PLANNING SERVICES VENDORS

"WE HAVE A PLANNING COMMITTEE COMPOSED OF THE VICE PRESIDENT FINANCE, VICE PRESIDENT PLANNING AND THE OPERATING DEPARTMENT HEADS WHICH IS INVOLVED IN PLANNING SYSTEM SELECTION."

"WE DON'T HAVE A FORMAL PROCEDURE PER SE. WE SEND LETTERS REQUESTS, INTERVIEW POTENTIAL CANDIDATES, ATTEND SEMINARS, ASK OTHER UTILITIES, AND SELECT THE VENDOR/ SYSTEM THAT MEETS OUR NEEDS THE BEST."

"THE DECISION PROCESS IS ITERATIVE. IT TAKES A WHILE TO GET THE IDEA ACCEPTED BUT ONCE IT WAS IT PROVED VERY USEFUL."

"THE HOLDING COMPANY TENDS TO CENTRALIZE THE DECISION PLANNING PROCESS AS TIME GOES BY. THIS IS BECAUSE THE SYSTEM DECISIONS ARE LARGE AND AFFECT ALL OPERATING COMPANIES."

"THE TREND IS TO GO DIRECTLY TO THE CEO AND INTEREST HIM IN NEW SERVICES. INVITING CEO'S TO PLANNING SEMINARS IS A GOOD FIRST APPRAOCH."

"THE NEXT MODEL FOR STRATEGIC PLANNING WILL GET LOTS OF EXECUTIVE MANAGEMENT ATTENTION."

EXHIBIT III-10

RESPONDENTS' ASSESSMENT OF KEY FACTORS IN SELECTION OF FINANCIAL/CORPORATE PLANNING SYSTEM/SERVICE

FACTOR	DEGREE OF IMPORTANCE (100)
REPORTING CAPABILITIES	97
TURN AROUND TIME	97
DOCUMENTATION	87
GRAPHICS CAPABILITIES	86
SIMULATION MODELING	83
FORECASTING TECHNIQUES	77
DATA BASE INTERFACE	74
CONSULTING	63
TRAINING	53
PROCESSING COST	48
PURCHASE PRICE	46
USERS GROUP	46
AVAILABLE FINANCIAL DATA BASES	40
LOCAL SUPPORT	31
NETWORKING CAPABILITY	20

EXHIBIT III-11

RESPONDENTS' COMMENTS ON FUTURE FINANCIAL/ CORPORATE PLANNING SYSTEMS

"WE ARE CONSIDERING DEVELOPMENT OF A LESS COMPLICATED CORPORATE MODEL, A MODEL BETTER ABLE TO DO "WHAT IF" ANALYSES AND GIVE QUICK ROUGH-CUT ANSWERS."

"WE MAY REVISE AND UPGRADE OUR FINANCIAL MODEL. WE WILL BE REFINING OUR CORPORATE STRATEGIC MODEL."

"WE WILL BE DEVELOPING A "MACRO" MODEL IN APL."

"WE WILL BE DEVELOPING A NEW PLANNING METHODOLOGY THAT WILL ALLOW US TO DEVELOP A CORPORATE STRATEGIC MODEL IN FIVE YEARS."

"WE ARE PLANNING TO BRING OUR CORPORATE FINANCIAL MODEL IN-HOUSE. WE ARE LOOKING AT THE PRIME MINI APPROACH."

"WE WILL BE DEVELOPING BETTER WAYS TO FORECAST UNDER CONDITIONS OF UNCERTAINTY."

- Parameters and assumptions may be common at the beginning of the planning cycle, but by the time the two year budget is completed they no longer agree. Several iterations of the two to five year forecast are required to adjust for the differences. The problem is not so severe in utilities with centralized planning.

- Executives believe that by adopting a data base management system, corporate planning assumptions and parameters and forecasted data could be passed between functional departments and corporate planning. This would permit centralized financial and strategic planning coupled with decentralized forecasting in the functional departments.

8. PREFERRED MODE OF FUTURE SERVICE DELIVERY

- As can be seen in Exhibit III-12, six respondents indicate that they would like to use minicomputers for corporate planning systems.

- Corporate executives feel that existing RCS services are responsive, but with increased use become too expensive.

- Some respondents are with just cause afraid that response and turn around time will become unacceptable, if they move the planning software to their in-house IBM mainframes.

- The most attractive option appears to be the use of an IBM plug compatible user site mini system which can either access the IBM mainframe or interconnect to the RCS vendor's network for data base access as required.

EXHIBIT III-12

RESPONDENTS' PREFERRED METHOD OF FINANCIAL/CORPORATE PLANNING SERVICES DELIVERY

MODE OF SERVICE DELIVERY	RESPONDENTS
IN-HOUSE SOFTWARE PRODUCT/ PROFESSIONAL SERVICES	4
REMOTE COMPUTING SERVICE/ PROFESSIONAL SERVICES	0
USER-SITE MINI COMPUTER/ PROFESSIONAL SERVICES	6

9. APPLICATION INTERFACES

- Respondents were particularly interested in having corporate planning systems interface with data base management systems. They saw this as the means of establishing and maintaining a common set of parameters and assumptions and forecasted values between the corporate model and the various functional area forecasting models (Exhibit III-13).

- Respondents also wanted corporate planning models to interface with flexible graphics packages. Some respondents wanted to be able to go from model output to board room projection screens smoothly and quickly.

- Respondents wanted more comprehensive report writer systems for formatting and editing planning model output. Respondents wanted methods of presenting differences between alternate scenarios.

- Respondents were much more interested in using DBMS as a means of interfacing financial/corporate planning systems with existing planning models than they were in interfacing with the models directly.

10. USE OF PROFESSIONAL CONSULTING SERVICES

- Respondents were interested in using professional consulting services primarily for planning system installation and support. The interviews evidenced little interest in using consultants to improve the corporate planning organizational structure (see Exhibit III-14).

- Respondents used professional consulting services for corporate planning systems design. Respondents wanted professional services for joint development on-site so that after installation, the user could revise and maintain the models.

- Typical respondent comments with respect to use of professional consulting services are found in Exhibit III-15.

EXHIBIT III-13

RESPONDENTS' NEEDS FOR INTERFACING SUBSYSTEMS WITH FINANCIAL/CORPORATE PLANNING SYSTEMS

TYPE	RESPONDENTS
DATA BASE MANAGEMENT SYSTEMS (DBMS)	9
GRAPHICS	9
REPORT WRITER	6
STATISTICS	3
GENERAL LEDGER	3
LOAD FORECASTING	2
POWER SUPPLY	2
CUSTOMER ACCOUNTING	1

EXHIBIT III-14

RESPONDENTS' ATTITUDES TOWARD USING PROFESSIONAL CONSULTING SERVICES FOR FINANCIAL/CORPORATE PLANNING

FUNCTION	RESPONDENTS
ORGANIZATIONAL STRUCTURE	-
CUSTOMIZATION	-
INSTALLATION	6
SUPPORT	9
LITTLE NEED	1

EXHIBIT III-15

RESPONDENTS' COMMENTS ON THE USE OF PROFESSIONAL CONSULTING SERVICES FOR FINANCIAL/CORPORATE PLANNING

"WE WANT HELP IN ANALYSIS AND IN APPROACH. WE WANT TO PARTICIPATE IN MODEL DEVELOPMENT WITH THE VENDOR."

"WE HAVE ONLY USED PLANMETRICS AND ARE VERY PLEASED WITH THEM."

"WE NEED CONSULTANTS FOR SPECIFIC ISSUES OR TO DESIGN SPECIFIC MODELS. WE WANT TO WORK WITH THEM TO DEVELOP THE ABILITY TO DO OUR OWN IMPLEMENTATION."

"WE NEED SPECIFIC HELP IN END USE, IN LOAD FORECASTING, AND IN POWER DISTRIBUTION. WE WANT TO UNDERSTAND THE PROCESS AND HOW SOFTWARE IS BUILT SO WE CAN MAINTAIN AND UPDATE THE PACKAGE AS NECESSARY."

"WE USE CONSULTANTS EXTENSIVELY IN ALL AREAS OF MODEL CONSTRUCTION AND IMPLEMENTATION."

E. FINANCIAL AND CORPORATE PLANNING SERVICES

1. USE OF EDP

- As shown in Exhibit III-16, nine utilities used financial planning models. Four utilities were using the services of an RCS vendor (Tymshare) to run the model.

- The executives of all four utilities using RCS services were planning to move the models in-house. Three out of four of these executive were looking at minicomputers as the preferred approach.

- Nine utilities were using RCS vendors, primarily Data Resources, Inc. (DRI) to access and manipulate economic data bases for economic forecasting based on interest rates, national economic indicators, energy costs, and regional demographics.

- Three utilities were in the process of implementing corporate strategic planning models, two in-house using APL and one using DYNAMO through a RCS vendor.

2. LEVEL OF EDP EXPENDITURES

- There is some differential in total EDP expenditures as a function of utility size. Very large utilities, particularly utility holding companies, have more complex operating and financial structures and use more services. Exhibit III-17 indicates that very large utilities, while over three times the size of medium size utilities in terms of revenues, spend less than twice as much for computer aided planning services.

- The data on RCS expenditures include timesharing services, software packages, and professional services. The data on in-house usage include computer time and systems and software support.

EXHIBIT III-16

RESPONDENTS' USE OF EDP FOR FINANCIAL/CORPORATE PLANNING

FUNCTION	USE	
	IN-HOUSE (RESPONDENTS)	RCS (RESPONDENTS)
BUDGETING	6	4
FINANCIAL PLANNING	5	4
ECONOMIC FORECASTING	-	9
STRATEGIC PLANNING	2	1

EXHIBIT III-17

RESPONDENTS' AVERAGE LEVEL OF EDP EXPENDITURES FOR FINANCIAL/ CORPORATE PLANNING SERVICES

UTILITY SIZE	ANNUAL EXPENDITURES	
	IN-HOUSE ($000)	RCS ($000)
VERY LARGE REVENUES >$800M	$270	$200
LARGE REVENUES $400-800M	-	300
MEDIUM REVENUES $100-400M	-	225

- The data also indicate that very large utilities expend the major portion of their financial/corporate planning systems EDP budgets in-house.

- Respondents at all utility size levels had uniform expectations per Exhibit III-18 of significant increase (20%) in the level of EDP expenditures for financial/corporate planning systems.

3. COMPUTER AIDED PLANNING FUNCTIONS

- The variety of functions aided by modeling systems is shown in Exhibit III-19.

- Corporate planning executives in two utilities have responsibilty for the development and operation of a corporate model that includes financial planning.

- There are three utilities where the rate structure planning/modeling is decentralized at the operating level.

- Three utilities separate short and long-term load forecasting from resource planning.

- One utility has spent so much time on siting hearings that siting planning has become a specialized activity.

- As can be seen in Exhibit III-20, long-range planning in terms of its effect on financial statements is highest in corporate planning executives' minds. While some functions such as a cash requirements forecasting are important, future corporate planning systems must support the long-range strategic planning process.

- Typical comments on executive expectations in using financial/corporate planning systems are found in Exhibit III-21.

EXHIBIT III-18

RESPONDENTS' ESTIMATE OF GROWTH IN USE OF FINANCIAL/CORPORATE PLANNING SERVICES

UTILITY SIZE	AVERAGE GROWTH PER YEAR (PERCENT)
VERY LARGE REVENUES >$800M	19%
LARGE REVENUES $400-800M	23%
MEDIUM REVENUES $100-400M	21%

EXHIBIT III-19

RESPONDENTS' FINANCIAL/CORPORATE FUNCTIONS ACCOMPLISHED WITH COMPUTER AIDED SOFTWARE SYSTEMS

FUNCTION	RESPONDENTS	
	FINANCIAL	CORPORATE
FINANCIAL PLANNING	8	2
STRATEGIC PLANNING	-	5
RATE STRUCTURES	5	2
RISK ASSESSMENT	-	1
LOAD FORECASTING	7	6
RESOURCE PLANNING	6	7
SITING PLANNING	1	-
TAX PLANNING	1	-

EXHIBIT III-20

PLANNING FUNCTIONS RESPONDENTS WANT SUPPORTED BY FINANCIAL/CORPORATE PLANNING SYSTEMS

PLANNING FUNCTION	RESPONDENTS
LONG-RANGE PLANNING	10
INCOME STATEMENTS	10
SOURCE AND USE OF FUNDS	10
TAX DETERMINATION	10
BALANCE SHEET	9
RATE ANALYSIS	8
CAPITAL BUDGETING	7
CASH REQUIREMENTS FORECASTING	7
CAPITAL STRUCTURES ANALYSIS	6
OPERATING BUDGETING	5
CASH MANAGEMENT	5
INVESTMENT ANALYSIS	4
LEASE/BUY	4
FACILITIES PLANNING	3
REVENUE FORECASTING	2
"WHAT IF" ANALYSIS	1
GOAL SEEKING	1
STRATEGIC PLANNING	1

EXHIBIT III-21

RESPONDENTS' COMMENTS ON EXPECTED USE OF FINANCIAL/CORPORATE PLANNING SYSTEMS

"WE NEED TO DETERMINE BANK LINE OF CREDIT, THE VOLUME OF STOCKS AND BONDS THAT WE HAVE TO SELL, HOW MUCH TO FILE FOR RATE INCREASE."

"WE NEED TO DETERMINE HOW TWO SCENARIOS DIFFER IN RESULTS."

"WE REALLY WANT TO ADDRESS BROAD ISSUES SUCH AS: AT WHAT LEVEL SHOULD WE MAINTAIN EXCESS CAPACITY IN LIGHT OF UNCERTAINITY IN RAISING LONG TERM CAPITAL?"

"OUR CURRENT MODELS ARE DETERMINISTIC. FOR EACH CASE OF INPUTS IT PRODUCES A SET OF OUTPUTS. WE KEEP CHANGING INPUTS UNTIL WE GET AN OUTPUT CASE THAT 'LOOKS GOOD.' WE NEED A BETTER WAY TO SELECT FROM ALTERNATIVES."

"CURRENTLY WE DO A 2-YEAR BUDGET PROCESS, THEN FEED THE RESULTS TO THE COMPUTER MODEL THAT DOES A FIVE YEAR FORECAST. IF WE DON'T LIKE RESULTS WE REPEAT IT. THE WHOLE PROCESS SHOULD BE DONE AS ONE DEAL."

4. DATA BASE UTILIZATION

- A wide variety of data bases are used in conjunction with the financial/corporate planning systems (Exhibit III-22). For the most part the data bases are used in forecasting models, the outputs of which become inputs to the corporate financial model.

- The major data base vendor to public utilities is Data Resources, Inc. (DRI).

- Respondents felt that corporate strategic models would make greater direct access to both national and regional economic and demographic data bases as the use of strategic models becomes more widespread.

EXHIBIT III-22

RESPONDENTS' USE OF DATA BASES FOR FINANCIAL/ CORPORATE PLANNING SYSTEMS

DATA BASE	FUNCTION	VENDORS
ENERGY COSTS	RESOURCE PLANNING	DRI, GEIS, ADP
ENERGY SUPPLY	RESOURCE PLANNING	DRI, GEIS, ADP
CENSUS	LOAD AND REVENUE FORECASTING	DRI, ADP
U.S. ECONOMIC	INTEREST RATES, COST OF CAPITAL	DRI, CHASE
REGIONAL ECONOMIC	LOAD AND REVENUE FORECASTING	DRI, CHASE
WEATHER DATA	LOAD FORECASTING	DRI, REGIONAL WEATHER SERVICES
COMPUSTAT	MERGER AND ACQUISITIONS	DRI, ADP
UTILITY CORPORATE RATING	INVESTMENT ANALYSIS	DRI
MERRILL LYNCH BOND RATES	RATING STUDIES	NCSS

IV MARKETING AND TECHNICAL REQUIREMENTS

IV MARKETING AND TECHNICAL REQUIREMENTS

A. MARKETING REQUIREMENTS

- Marketing must be staffed with people well versed in the financial/corporate planning process within public power utilities.

- Marketing personnel must be aware of the regulatory process both with respect to siting and rate hearings.

- The marketing staff must be supported by consultants who are willing to work on-site with utility planning personnel in system design and development.

- In selling financial/corporate planning services, marketing contact should be made at the highest level. Presentations to the CEO and the corporate planning committee are the most effective approaches.

- Sponsoring or participating in corporate planning seminars are another method of making high level power utility executives aware of company capabilities.

- Special attention should be given to marketing financial/corporate planning services to smaller public utilities. Use the model building software to develop simplified modular models for corporate planners. The models can be tailored on short notice to meet specific utility requirements. The models can be increased in function and complexity as utility planning executives learn how to accomplish effective financial/corporate planning using the modeling system.

- Marketing must track federal legislation to anticipate additional utility planning/reporting requirements such as those in the most recent Energy Act.

- Marketing must be aware of conditions in capital markets to insure planning models consider all alternate forms of money market instruments.

- Marketing must track tax law changes and rulings, such as investment tax credit or buy back leases, that affect utility corporate planning.

B. TECHNICAL REQUIREMENTS

I. FINANCIAL PLANNING

- Technical requirements for financial planning systems were found to be somewhat different from those of corporate strategic planning systems.

- The financial planning process assumes that all forecasting has been accomplished before running the financial model. Using forecasted values of selected inputs coupled with financial assumptions and parameters, the financial models simulate the firm's financial activity over time in a deterministic manner.

- As shown in Exhibit IV-1, respondents are interested in techniques that produce such data as accurate financial ratios, return on investment and other financial statement items. Techniques such as linear regression or Box-Jenkins techniques are of little value to short-term planning needs.

EXHIBIT IV-1

RESPONDENTS' ASSESSMENT OF MODELING/FORECASTING TECHNIQUES MOST IMPORTANT FOR FINANCIAL PLANNING SYSTEMS

TECHNIQUE	DEGREE OF IMPORTANCE (000)
"WHAT IF" ANALYSIS	100
FINANCIAL RATIO ANALYSIS	96
INPUT REQUIREMENTS MINIMIZED	72
RETURN ON INVESTMENT ANALYSIS	68
SIMULTANEOUS EQUATIONS	40
SIGNIFICANCE TESTING	40
MULTIPLE REGRESSION	40
SENSITIVITY ANALYSIS	36
RISK ANALYSIS	32
TIME SERIES FORECASTING	32
LINEAR REGRESSION	32
EQUATION REORDERING	32
ZERO BASE BUDGETING	28
DISCOUNED CASH FLOW	24
BOX-JENKINS	24

- Respondents want financial planning systems that handle large numbers of data input elements which can be accessed through data base management systems.

- Flexible report writer subsystems are required to present output data for management review.

- An added plus is a graphics package that can present data on impact of financial change in graphic form for rapid management assessment of planning alternatives.

- Respondents are interested in financial planning systems that offer quick turn around time for processing changes to input values operating from a base line.

- The system should emphasize "ease of use" by offering modeling capability in a higher order language which uses terms familiar to financial executives.

- The language should provide the capabilty of defining "what if" analyses so that financial planners can evaluate financial alternatives.

- The system should be oriented toward use on an IBM plug compatible user site minicomputer system. The system should be capable of interfacing with the host processor for internal data base access and to external financial and economic data bases through a RCS vendor network.

- The system should be offered on an RCS basis to smaller power utilities.

- The system should be provided with a wide variety of standard financial functions which the planner can use in model development. Examples of needed functions are:

    - Financial ratio analysis.

    - Depreciation.

  - Lease/buy.
  - Return on equity.
  - Consolidation.
  - Pro forma financial statement preparation.

- The system must be well documented.

- The system should provide good audit trails.

2. CORPORATE STRATEGIC PLANNING

- Corporate Strategic Planning encompasses long-range planning under conditions of uncertainty. As such the technical requirements for strategic planning models have key differences from those of short-range financial planning.

- As shown in Exhibit IV-2, respondents are interested in techniques involving statistics and econometrics, such as risk analysis, multiple regression and time series forecasting.

- Corporate strategic planners are also interested in such techniques as goal seeking and statistical comparison of alternative scenarios.

- Corporate strategic systems should be able to simulate power utility functional relationships under dynamic conditions using statistical inference techniques.

- The system should be facile at giving rapid rough cut results to basic corporate issues on a broad versus a detailed basis.

EXHIBIT IV-2

RESPONDENTS' ASSESSMENT OF MODELING/FORECASTING TECHNIQUES MOST IMPORTANT FOR CORPORATE STRATEGIC PLANNING

TECHNIQUE	DEGREE OF IMPORTANCE (000)
"WHAT IF" ANALYSIS	100
COMPARE OUTPUT RESULTS	90
GOAL SEEKING	90
RISK ANALYSIS	85
MULTIPLE REGRESSION	85
BOX-JENKINS	85
TIME SERIES FORECASTING	85
SIMULTANEOUS EQUATIONS	80
EQUATION REORDERING	80
LINEAR REGRESSION	65
SENSITIVITY ANALYSIS	65
SIGNIFICANCE TESTING	65
ZERO BASE BUDGETING	55
FINANCIAL RATIO ANALYSIS	50
INPUT REQUIREMENTS MINIMIZED	40
RETURN ON INVESTMENT ANALYSIS	35
DISCOUNTED CASH FLOW	30

- A capable report writer is necessary to prepare output for management review.

- A flexible graphics package is necessary for presenting ranges of alternative strategic planning possibilities.

- The system should be highly interactive. Prompting messages should guide the user through model development and execution.

- The system should execute rapidly to provide quick turn around time.

- The system should have a comprehensive set of econometric and statistical routines for estimating variable interrelationships and for assessing risk. Examples are:

  - Multiple regression.

  - Auto correlation

  - Box-Jenkins.

  - Monte Carlo simulation.

  - Risk analysis.

  - Sensitivity analysis.

- The language should provide "what if" capability to help corporate planners develop strategic alternatives.

- The language should provide for goal seeking and ways of maximizing or minimizing variables subject to other constraints.

- The system must be able to simultaneously execute user specified equations.

- The system should provide for automated variable significance testing.

- The system should be offered to larger utilities on a user site IBM plug compatible minicomputer, and to smaller utilities on an RCS basis.

- The system must be well documented.

V COMPETITIVE ENVIRONMENT

V COMPETITIVE ENVIRONMENT

A. COMPETITIVE STRUCTURE

- Two types of vendors exist in the power utility financial/corporate planning systems marketplace.

    - Vendors offering financial management and planning systems oriented primarily toward budgeting (two year) and short-range planning (two to five years). Some of these vendors have language/modeling features which help in long-range forecasting under conditions of uncertainty, but their orientation is basically deterministic.

    - Vendors offering corporate planning systems oriented primarily toward longer range (five to twenty years) strategic planning. The planning systems aid in obtaining ranges of answers to broad corporate policy issues through dynamic simulation using econometric and statistical techniques.

- Two primary methods of delivery also differentiate financial/corporate planning services vendors in the marketplace. However, technology in the form of minicomputers, is blurring market segmentation.

    - Software products/professional services vendors who offer analysis and planning products directly to end users for in-house installation. They offer extensive consulting services in conjunction with system installation to assist users in model building.

- Software/professional services vendors who offer their systems through remote computing services (RCS) vendors. Some of these vendors are planning to offer their financial/corporate planning services on minicomputers.

B. VENDOR PERCEPTIONS

1. MARKET GROWTH

- Vendors interviewed believed that the power utility market has increasing needs for their services. Those vendors interviewed felt that their utility related revenues will grow at an AAGR exceeding 25% over the next five years.

2. LEADING COMPETITORS

- All vendors felt that Planmetrics was the leading vendor supplying financial planning services to power utilities.

- Other vendors supplying financial/corporate planning services are:

  - Power Technology.

  - TRACE.

  - Arthur Andersen.

  - Economic Sciences Corporation.

  - Management Analysis Corporation.

3. KEYS TO SUCCESSFUL MARKETING

- Vendors interviewed felt that the quality of their marketing consultants and technical support were key elements in successfully marketing financial/corporate planning services. Ease of system use is another key factor (Exhibit V-1).

- Vendors reported targeting their marketing efforts to top utility company executives through planning seminars and participation in industry conferences (EPRI and Edison Electric Institute).

4. USE OF USER SITE MINICOMPUTERS

- Three vendors interviewed were currently offering or planned to offer financial/corporate planning systems on minis; either as turnkey systems or as a user site vendor supplied minicomputer.

5. IMPORTANCE OF DBMS

- Vendors offering financial planning services felt it was important to be able to access power utility company actual and forecasted data through a DBMS system.

- Vendors offering corporate planning services for long-range strategic planning did not feel accessing data through a DBMS system was essential to their product offerings.

6. IMPORTANCE OF EXTERNAL FINANCIAL AND ECONOMIC DATA BASES

- Vendors offering financial planning services felt that external financial and economic data bases were used in forecasting data used as inputs to the financial model. As such offering data bases was a plus but not essential.

EXHIBIT V-1

VENDORS' KEY ELEMENTS IN SUCCESSFUL MARKETING OF FINANCIAL/CORPORATE PLANNING SERVICES TO PUBLIC POWER UTILITIES

KEY ELEMENT	NUMBER OF TIMES MENTIONED
CALIBER OF CONSULTANTS	5
PRODUCT MEETS UTILITY'S NEEDS	4
EASE OF SYSTEM USE	4
QUALITY OF MARKETING PERSONNEL	4
RANGE OF FUNCTIONS	3
FLEXIBILITY	3
ABILITY OF INTERFACE WITH OTHER PRODUCTS	2
USER GROUPS	1

- Vendors offering corporate planning services were more attuned to the value of doing time series analysis using external data bases as part of forecasting in the strategic planning process.

7. PROFESSIONAL CONSULTING SERVICES

- Vendors interviewed felt that quality professional consulting services were essential in selling financial/corporate planning services to public utilities.

C. VENDOR REVENUES FROM FINANCIAL/CORPORATE PLANNING PRODUCTS AND SERVICES

- The 1978 market for financial/corporate planning products and services to public power utilities is $41 million. The market is divided into three segments: (1) Financial/Corporate Planning RCS Services ($16 million); (2) Software Products ($14 million) and (3) Professional Services ($11 million).

- The market is widely held among more than a dozen vendors. Planmetrics, the largest vendor with 1978 revenues of $10 million, has 25% of the marketplace. Planmetrics has over $3 million in RCS revenues through arrangements with Tymshare, Inc., another $4 million from the development and sale of financial planning models both for in-house installation, and for use by the utility on the Tymshare RCS network, and $3 million in professional consulting services at the user's site for model revision, maintenance and enhancement (Exhibit V-2).

- Pugh Roberts' corporate strategic planning models are developed using DYNAMO, which is offered together with economic and demographic data bases by GEIS.

- DRI RCS revenues are related to economic forecasting, economic, energy, and demographic data base access, and corporate strategic planning services.

EXHIBIT V-2

POWER UTILITY MARKET SHARE OF FINANCIAL/CORPORATE PLANNING SERVICES VENDORS IN 1978

SERVICES VENDORS	ESTIMATED REVENUES				MARKET SHARE (%)
	RCS SERVICES ($ MILLION)	SOFTWARE PRODUCTS ($ MILLION)	PROFESSIONAL SERVICES ($ MILLION)	TOTAL ($ MILLION)	
PLANMETRICS	3.0	$ 4.0	$ 3.0	$10.0	25%
POWER TECHNOLOGY, INC.		0.5	0.5	1.0	2
ARTHUR ANDERSEN COMPANY		1.0	0.5	1.5	4
STONE AND WEBSTER COMPANY		0.5		0.5	1
PUGH AND ROBERTS, INC.		0.5	0.5	1.0	2
MANAGEMENT ANALYSIS CORP.		1.5	1.0	2.5	6
ECONOMIC SCIENCES CORP.		2.0	1.0	3.0	7
DECISION FOCUS, INC.		1.0	1.0	2.0	5
SOCIAL SYSTEMS, INC.		0.5	0.5	1.0	2
GEIS	2.0			2.0	5
DRI	3.0		1.0	4.0	10
NCSS	2.0			2.0	5
ADP NETWORK SERVICES, INC.	2.0			2.0	5
ALL OTHERS	4.0	2.5	2.0	8.5	21
TOTAL	$16.0	$14.0	$11.0	$41.0	100%

- NCSS derives its RCS utility related revenues through both data base services and the use of Economic Sciences' corporate planning modeling services on the NCSS timesharing network.

- ADP Network Services, Inc., derives its utility related RCS revenues primarily through financial analysis and forecasting related to economic and financial data bases.

- Management Analysis Corporation, Economic Sciences, Inc., and Decision Focus, Inc., derive a combination of software products and professional services revenues through offering corporate strategic planning models that deal with long-range planning under conditions of uncertainty.

- Power Technology, Inc., Arthur Andersen, and Stone and Webster all have developed comprehensive budgeting and short-range financial models that are installed and supported in-house, and operate on a batch or remote batch basis. Stone and Webster and Arthur Andersen planning systems, accounting oriented, are more suited to budget preparation and are considered obsolete by the industry.

- SIMPLAN (Social Systems, Inc.) is being used by several Southeastern power utilities for both financial and strategic planning and operates on in-house IBM 370 mainframes.

- Respondents' use of financial/corporate planning services vendors is shown in Exhibit V-3. The marketing domination of Planmetrics for financial planning systems is apparent from the interview sample.

EXHIBIT V-3

RESPONDENTS' USE OF FINANCIAL/CORPORATE PLANNING SERVICES VENDORS

VENDOR	NUMBER OF RESPONDENTS	
	FINANCIAL PLANNING	CORPORATE PLANNING
PLANMETRICS	6	
TRACE, INC.	1	
POWER TECHNOLOGY	1	
ARTHUR ANDERSEN	1	
PUGH ROBERTS, INC.		1
ECONOMIC SCIENCES, INC.		1
MANAGEMENT ANALYSIS CORPORATION		1
TOTAL	9	3

D. KEY VENDOR PROFILES

1. RCS VENDORS

a. ADP Network Services (ADP)

- ADP offers two financial management and planning languages, TSAM and FML. TSAM (Time Series Analysis and Modeling) is used for econometric and economic forecasting as well as for financial planning, whereas FML, a more recent release (1977), meets 85-90% of the market needs for corporate financial planning.

- In addition to RCS, ADP is offering financial/corporate planning services on their on-site DEC 2020 mini. The FML system leases for $750/month for on-site use.

- ADP is concentrating effort in the financial community. They have integrated several software products and built application modules to create the FINALYST system. FINALYST is an integrated system of analytical and reporting routines combined with a family of data bases, designed specifically for the financial community.

- With 1978 financial/corporate planning revenues of $15 million, $2 million of which is power utility related, ADP is the third largest computer services vendor.

b. General Electric Information Services (GEIS)

- GEIS with 1978 financial/corporate planning revenues of $40 million, $2 million of which is power utility related, is the current leader in offering financial management and planning remote computing services. GEIS has specialized in the manufacturing (process and discrete) sector as well as in the financial sector.

- Using FORTRAN as a base, they have created a financial analysis language (FAL II), a Market Analysis and Projection (MAP) program, a graphic language (PLOT II), and a statistical system (STAT SYSTEM). Each system interfaces with the other and with FORTRAN.

- Recently, GEIS has been giving more attention to providing economic and financial data bases in more direct competition with Data Resources, Inc., (DRI).

- GEIS can be expected to revise and improve its product line to expand its market share. A major improvement will be the integration of a data base managment system which will allow FAL II to interact both to external economic and financial data bases, and to internal corporate data.

c. Planmetrics, Inc.

- Planmetrics is the only major competitor offering financial planning services to the power utility industry.

- Planmetrics as On-Line Decisions was the first company to concentrate on the power utility marketplace offering an on-line interactive approach.

- With 1978 annual revenues of $10 million, Planmetrics 80-100 man professional staff assists 40-50 power utilities on-site in designing and installing custom tailored financial planning models.

- The major portion of Planmetrics' clients develop and operate financial planning models using the Tymshare RCS network. Planmetrics sells the RCS services directly to the end user negotiating block rates from Tymshare. Of the $10 million 1978 revenues, about 30% is RCS related.

- Key to Planmetrics success has been a combination of responsive on-site consulting during the development and implementation phase and the quality of the modeling software operating system (GPOS).

- Initial systems were coded in FORTRAN and ran on the XDS 940. A later version coded in PL/I runs on the IBM System/360/370. This version has been installed in-house for several larger utilities. A new version is planned to be offered as a turnkey system on the Prime minicomputer.

- The operating system greatly eases the programming burden on the financial analyst by accomplishing I/O, report writing, and the mechanics of model simulation.

- Planmetrics receives uniformly good press from their clients, a real asset in marketing to public power utilities.

- By involving power utility top management in planning seminars and user group meetings Planmetrics remains highly visible in the industry.

d. Service Bureau Company (SBC)

- SBC has developed a comprehensive set of financial management and planning software as part of their "Business Information Services for Planning, Analysis, and Control - (BISPAC)."

  - SBC's approach is to offer the software fully supported by consulting services to help the user define and program the desired applications.

  - In this sense, SBC provides more customer support (for a fee) than many of the other RCS vendors.

- SBC developed and enhanced PROPHIT II for their RCS network.

  - The system has several levels of sophistication such that initial applications can easily be developed for new users.

  - The model can later be enhanced without redoing the initial design.

- SBC also has a number of compatible subsystems that extend and enhance PROPHIT II. These include: DATA PAC for statistical analysis; RISKAN II for risk analysis; TIME PACK II for time series analysis and forecasting; MMX for data management; and PICTURE PAC for graphics.

- Of 1978 financial/corporate planning system revenues, less than $1 million is believed related to the power utility industry.

e. Data Resources, Inc. (DRI)

- DRI has made access to a wide variety of economic and financial data bases economic and attractive to financial planners. This has tended to make DRI relatively immune to users shifting to in-house systems, whether through timesharing or minicomputers.

- DRI's initial offering, Econometric Programming System (EPS), is a comprehensive software system oriented toward economic and financial analysts.

  - The language enables econometric and economic analyses to be conducted on a detailed level.

  - DRI either helps clients develop the model, or develops the model for the client.

- DEI recently introduced EMPIRE, an integrated modeling, analysis, and reporting system oriented toward the business planner.

  - The system is oriented toward ease of use. Many of its functions are implicit or built in.

  - With EMPIRE users can produce the full range of corporate financial reports such as balance sheets, income statements, cash requirements, and fund flow statements.

- DRI also provide an Energy Data Base and an Energy Supply forecasting system.

- Of $12 million in 1978 financial/corporate planning services related revenues, approximately $3 million is related to the power utility industry.

f. National CSS (NCSS)

- NCSS has been successful in offering financial/corporate planning products developed by software vendors on an exclusive RCS basis.

- Economic Modeling System (EMS) developed by Economic Sciences Corporation is a modeling and forecasting system for use by economic and financial analysts. The system is excellent for time series analysis, and analyzing such things as company versus industry performance.

- With the introduction of the NCSS 3200, NCSS is offering the full range of its financial planning services to its clients on an on-site IBM compatible minicomputer. The client can still gain access to economic and financial data bases and consolidate company financial data through the NCSS timesharing network.

- Of $9 million in 1978 financial/corporate planning services revenues, $2 million is related to the power utility industry.

2. SOFTWARE VENDORS

a. Foresight Systems, Inc.

- Foresight Systems, Inc., a subsidiary of United Computing Services (UCS), markets Foresight software to end users and on the UCS and Mellonics timesharing networks.

- The system was developed in FORTRAN and is, therefore, available on a wide variety of host processors.

- An active user group helps with suggestions for improvements and provides references to prospective clients.

- The system sells for $35, 000.

- FORETAX was developed using FORSIGHT.

  - The system allows the corporate planner to do both Federal and State tax compliance and to do future tax planning.

  - The system is particularly useful in analyzing the tax consequences of proposed mergers or acquisitions.

- 1978 revenues are estimated at $4.5 million, with less than $0.5 million related to the power utility industry.

b. Social Systems, Inc. (SSI)

- SSI, a privately held company, markets SIMPLAN directly to end users and on a timesharing basis through AVCO and Informatics.

- The development effort is supported by an active user group.

- The system has been implemented in PL/I for the IBM 370.

- The system sells for $37,500.

- Approximately 15% of SSI's revenues are derived from professional consulting services.

- Of $4 million 1978 revenues, approximately $1 million came from the power utility industry.

c. Execucom Systems Corporation

- Execucom, a privately held company, markets the Interactive Financial Planning System (IFPS) to end users and on a timesharing basis through Control Data Corporation (CDC).

- The system was developed in FORTRAN and is available on a wide variety of mainframes and the PRIME 400 minicomputer.

- The system sells for $42,000. Maintenance after the first year is $200/month.

- Execucom has established "The Planners League" to foster the practice of corporate planning among its users.

- Execucom has recently announced the formation of a planning laboratory at its corporate offices. Data, visual and audio support systems will allow realtime simulation of the planning process. Corporate planners will be able to see the results of alternative planning strategies projected into future time slots.

- Little of Execucom's 1978 revenues of $2.5 million are derived from the power utility industry.

d. Cuffs Planning and Models Ltd.

- Cuffs is a privately held company.

- The Combs Unangst Financial Forecast System (CUFFS-II) is marketed to end users and on a timesharing basis through Compuserv and CallData.

- The system is currently available for sale at $32,000, operating on the DEC 10/20 and the IBM 370.

- The system contains over 700 built-in general financial routines, 200 language commands, automatically reorders equations for optimum calculation, and executes simultaneous equations.

- Little of Cuffs' 1978 revenues of $2.0 million are derived from the power utility industry.

e. Pugh Roberts, Inc.

- Pugh Roberts is an engineering analysis and consulting firm in Cambridge, MA. Recently they have turned their attention to decision theory under dynamic conditions.

- Pugh Roberts has developed a model for corporate strategic planning under conditions of uncertainty using dynamic modeling techniques. They have programmed the model in DYNAMO, a dynamic analysis system evolved at MIT and available on several timesharing networks, notably GEIS.

- Pugh Roberts is privately owned, has less than 30 people, and currently has revenues of less than $1 million in the area of corporate strategic planning services to the power utility industry.

f. Decision Focus, Inc. (DFI)

- Formed in 1976 from a group from Stanford Research Institute, Decision Focus, a privately held firm, has grown to 25 professional people with 1978 revenues estimated between $1-2 million.

- The company's business is directly related to the energy field and is primarily involved in using the techniques of decision analysis on strategic issues.

- Initially a prime contractor to EPRI and DOE and other government agencies, DFI is turning more of its attention to planning in the private sector.

- DFI has developed a Generalized Equalibrium Modeling System (GEMS) which permits development of simple structures that can be expanded with greater detail as required. The software system provides tools for data base management, input/output, report writing and overall model operation.

g. Management Analysis Corporation (MAC)

- Formed in 1975 from a group from General Atomic and General Electric, MAS, privately held, has grown to 65 people with 1978 revenues between $3-5 million.

- The company's business, is directly related to the energy field. Current business is equally divided between: project management systems, management planning, and systems analysis.

- MAS uses a decision theory approach to corporate strategic model building, using probabilistic techniques.

- The model building system uses high order languages English statements familiar to corporate planners.

- MAS orients their efforts at "Macro" model building using interactive systems that result in fast turn around time (< 2 hours).

- About 60% of their revenues come from custom software product development and 40% for professional analysis services.

h. Economic Sciences Corporation (ESC)

- Economic Sciences Corporation, a privately held company, offers economic and econometric consulting services directly and on an RCS basis through National CSS (NCSS).

- ESC specializes in the application of econometric estimation techniques to define and forecast under conditions of uncertainty.

- ESC has developed a comprehensive economic modeling system (EMS) for managing and displaying economic information, and for constructing and simulating financial and corporate planning models.

- EMS operates on both the NCSS RCS network and on the NCSS IBM plug compatible user site minicomputer.

- Of $1.5 million in 1978 revenues, half represents consulting and model building services to the power utility industry. The other portion of current revenues are derived from supporting a wide variety of RCS customers using EMS in conjunction with financial and economic data bases.

APPENDIX A: INTERVIEW SAMPLE

APPENDIX A: INTERVIEW SAMPLE

UTILITY NAME	HOLDING COMPANY	1978 REVENUES ($ MILLION)
FLORIDA POWER AND LIGHT	X	$1,500
NORTHERN STATES POWER		822
SAN DIEGO GAS AND ELECTRIC		508
PUBLIC SERVICE OF COLORADO		613
SOUTHERN CALIFORNIA EDISON		2,650
PUDGET SOUND POWER AND LIGHT		212
THE SOUTHERN COMPANY	X	2,700
PACIFIC POWER AND LIGHT		416
CENTRAL ILLINOIS PUBLIC SERVICE		350
TEXAS UTILITIES	X	1,400

APPENDIX B: DEFINITIONS

APPENDIX B: DEFINITIONS

- **COMPUTER SERVICES**

  These are services provided by vendors which perform data processing functions using vendor computers, or assist users to perform such functions on their own computers.

- The following are definitions of the modes of service used in this report.

- **REMOTE COMPUTING SERVICES (RCS)**

  Provision of data processing to a user by means of terminals at the user's site/s connected by a data communications network to the vendor's central computer. The three sub-modes of RCS are:

  1. INTERACTIVE (timesharing) is characterized by interaction of the user with the system, primarily for problem solving timesharing, but also for data entry and transaction processing; the user is "on-line" to the program/files.

  2. REMOTE BATCH is where the user hands over control of a job to the vendor's computer which schedules job execution according to priorities and resource requirements.

3. DATA BASE is characterized by the retrieval of information from a vendor-maintained data base. This may be owned by the vendor or a third party.

- BATCH SERVICES

This includes data processing performed at vendors' sites of user programs and/or data which are physically transported (as opposed to electronically by telecommunications media) to and/or from those sites. Data entry and data output services, such as keypunching and COM processing, are also included. Batch services include those expenditures by users which take their data to a vendor site which has a terminal connected to a remote computer used for the actual processing.

- FACILITIES MANAGEMENT (FM)

(Also referred to as "Resource Management" of "Systems Management.") The management of all or part of a user's data processing functions under a long-term contract (not less than one year). To qualify as FM, the contractor must directly plan and control as well as operate the facility provided to the user on-site, through communications lines, or mixed mode. Simply providing resources, even though under a long-term contract and/or for all of a users' processing needs, does not necessarily qualify as FM.

- PROFESSIONAL SERVICES

Management consulting related to EDP, systems consulting, systems design and programming, and other professional services are included in this category. Services can be provided on a basis of: "Time and Materials," whereby the user pays for the time used of an individual on a daily or other fixed rate, or "Fixed Price," where the user pays a fixed fee for a specific task or series of tasks.

- SOFTWARE PRODUCTS

This category is for users' purchases of systems and applications packages for use on in-house computer systems. The figures quoted include lease and purchase expenditures, as well as fees for work performed by the vendor to implement and maintain the package at the users' sites. Fees for work performed by organizations other than the package vendor are counted in professional services. The two sub-categories are:

1. SYSTEMS PACKAGES are operating systems, utilities, and language routines that enable the computer/communications system to perform basic functions. This software is provided by the mainframe manufacturers with their hardware; other vendors provide improved versions of this and special-purpose routines. This classification includes compilers, data base management software, communications packages, simulators, performance measurement software, diagnostic software, and sorts.

2. APPLICATIONS PACKAGES are software which perform processing to serve user functions. They consist of general purpose packages, such as for accounting and inventory control, and special purpose packages, such as personal trust, airline scheduling, and demand deposit accounting.

- PROCESSING SERVICES

Processing services encompass FM, RCS, and batch services: they are categorized by type of service, as distinguished from mode of service, bought by users as follows:

- GENERAL BUSINESS services are processing services for applications which are common to users across industry categories. Software is provided by the vendor; this can be a complete package, such as a payroll package, or an application "tool," such as a budgeting model, where a user provides much of the customizing of the finished product it uses. General business processing is often repetitive and transaction oriented.

- SCIENTIFIC AND ENGINEERING services are the processing of scientific and engineering problems for users across industries. The problems usually involve the solution of mathematical equations. Processing is generally problem solving and is non-repetitive, except in the sense that the same packages or "tools" are used to address different, but similar, problems.

- INDUSTRY SPECIALTY services provide processing for particular functions or problems unique to an industry or industry group. The software is provided by the vendor either as a complete package or as an application "tool" which the user employs to produce its unique solution. Specialty applications can be either business or scientific in orientation; data base services where the vendor supplies the data base and controls access to it (although it may be owned by a third party) are also included under this category. Examples of industry specialty applications are: seismic data processing, numerically-controlled machine tool software development, and demand deposit accounting.

- UTILITY services are those where the vendor provides access to a computer and/or communications network with basic software that enables any user to develop its own problem solution or processing system. These basic tools include terminal handling software, sorts, language compilers, data base management systems, information retrieval software, scientific library routines, and other systems software.

APPENDIX C: QUESTIONNAIRES

CATALOG NO. Y K F C ☐ ☐ ☐

Vendor Questionnaire

FINANCIAL MANAGEMENT AND PLANNING SYSTEMS
FOR THE POWER UTILITY INDUSTRY

1. What financial management and planning services do you currently offer to the Public Utilities Industry?

Name	D.P. Equipment	Number of Installations

2. What are the charges for its licence/use?

Software Products

RCS Services

Other:

3. What is the primary mode of delivery?

( ) Interactive ______ %

( ) Remote Batch ______ %

( ) Batch ______ %

4. What portion of your total 1978 revenues does FMP Services represent?

( ) Software Products ______ %

( ) RCS Revenues ______ %

( ) Professional Services ______ %

5. What is the degree of customization required to specifically apply your FMP Software to the Public Utility Industry?

6. To what extent are professional services coupled with the delivery of FMP Products/Services?

7. Who are your top three competitors for providing services to Public Utilities?

8. What do you think is the most cost effective method of delivering FMP Products/Services to the Public Utilities Industry?

( ) Software packages/Professional services for in-house use

( ) RCS/Professional Services

( ) Turnkey Systems on Minicomputers

9. What data bases are used by Public Utilities in conjunction with FMP Services?

Data Base Name

10. What do you feel are the key elements in successfully marketing your services to Public Utilities?

11. What are the specific financial/planning functions being accomplished by Public Utilities using your products/services?

12. Who are the key players in the decision to buy your product/services?

Point of contact:

Decision Maker:

User:

Comments:

13. What are the most important operational features of your FMP system?

14. What other areas need to be interfaced with your FMP products/services to enhance its use by Public Utilities?

( ) DBMS

( ) Graphics

( ) General Ledger

( ) Other

Comments:

15. Please send:

( ) Product Literature

( ) Annual Report (Public Firms)

CATALOG NO. Y K F C

USER QUESTIONNAIRE

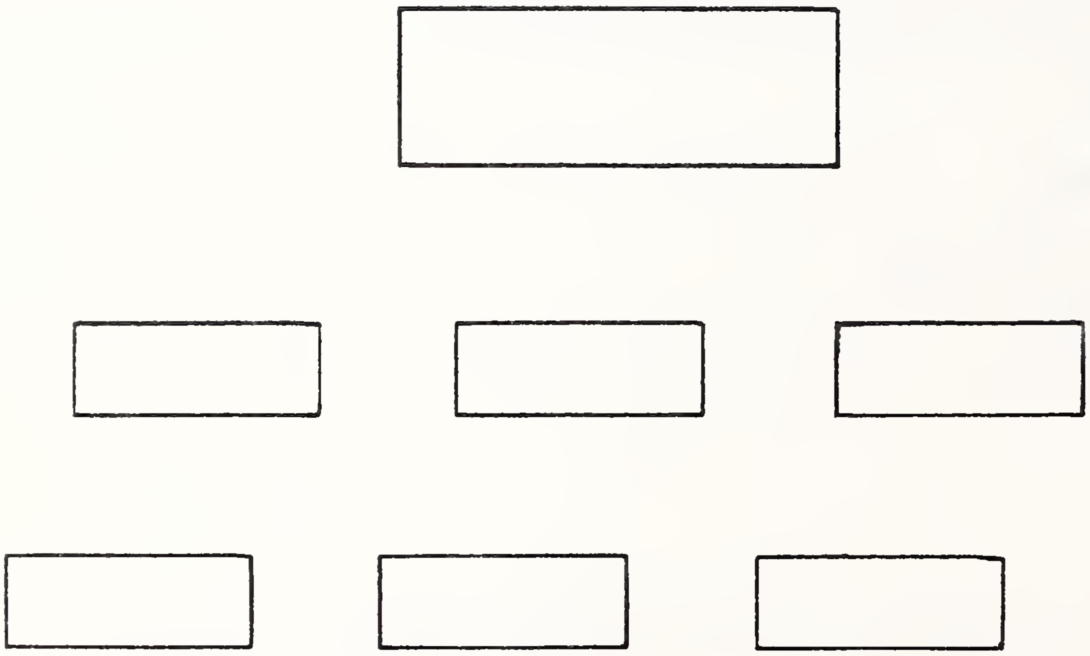
FINANCIAL MANAGEMENT AND PLANNING SYSTEMS FOR THE POWER UTILITY INDUSTRY

( ) Financial Officer

( ) Planning Officer

( ) Engineering Officer

1. How is the planning process accomplished within your organization?



Comments:

2. What other corporate groups directly interface with you in the planning process?

3. How well do you feel the current planning process works?

4. How would you like to see the planning process changed?

5. To what extent do you currently use computers to assist you in the planning process?

6. What planning functions are accomplished with assistance from computer models?

( ) Financial Planning

( ) Strategic Planning

( ) Rate structures

( ) Risk Assessment

( ) Load Forecasting

( ) Resource Planning

( ) Other

7. How have the planning models you currently use been developed?

( ) In House

(Comments)

( ) Vendor Supplied

Vendor Name:

Cost:

Comments:

8. Were there any other vendors/products you considered at the time?

9. To what extent do you use professional consulting services in conjunction with the planning process?

10. What data bases do you use in conjunction with your planning process?

( ) Internal

Comments:

( ) External

Names: Source

Comments:

11. What D.P. equipment do you use for computer assisted planning?

12. How much do you currently spend on an annual basis for computer services related to the planning process?

13. What is the decision process in selecting computer assisted planning services?

    Point of Contact:

    Others Involved:

    Key Decision Maker:

    Comments:

14. What are the external factors which influence your use of computer assisted planning?

Comments:

15. Do you see your use of FMPS increasing over the next 2-3 years?

( )Increase _________%

Comments:

16. Will you be selecting a new or expanded system during that (2-3 year) time frame?

17. What are the most important factors in selecting a financial planning computer system/service?

(Rank on a scale from 5=most important, 1=least important, each factor separately)

( ) Processing cost ______

( ) Purchase Price ______

( ) Networking Cabability ______

( ) Forecasting Techniques ______

( ) Simulation Modeling ______

( ) Reporting Capabilities ______

( ) Turn around time for results ______

( ) Data base interface ______

( ) Available financial data bases ______

( ) Local support ______

( ) Graphics capabilities ______

( ) Consulting ______

( ) Training ______

( ) Users Group ______

( ) Documentation ______

( ) Other ______________________________ ______

Comments:

CATALOG NO. Y K F C _ _ _

18. What modeling/forecasting techniques are most important?

(Rank on a scale from 5=important, 1=unimportant, each technique)

Input requirements minimized ______

Return on investment analysis ______

Discounted cash flow ______

Risk analysis ______

Simultaneous equations ______

Time series forecasting ______

Linear regression ______

Financial ratio analysis ______

Sensitivity analysis ______

Significance testing ______

Equation reordering ______

Multiple regression ______

Box-Jenkins ______

Zero base budgeting ______

"What If" analysis ______

Other ____________________________ ______

Comments:

19. What functions would you like to see covered using Financial and Management and Planning computer software?

( ) Long range planning

( ) Capital budgeting

( ) Operating budgeting

( ) Investment analysis

( ) Cash management

( ) Cash requirements forecasting

( ) Capital structures analysis

( ) Market planning

( ) Facilities planning

( ) Lease/Buy

( ) Pro forma

( ) Balance sheet

( ) Income statements

( ) Source and use of funds

( ) Rate analysis

( ) Tax determination

( ) Other

Comments:

20. How would you like to see FMPs services delivered?

( ) In house software product/Professional services

( ) RCS Vendor/Professional services

( ) Minicomputer/Professional services

21. What other applications would you like to see the FMPs system interface with to assist in the planning process?

	TYPE	NAME
( )	DBMS	________
( )	Statistics	________
( )	Graphics	________
( )	Report Writer	________
( )	General Ledger	________
( )	Existing Planning Models	________
( )	Other ________	________
( )	Other ________	________

Comments:

22. How important is having the data base of parameter and assumptions used in various planning models be common between them?

Comments:

23. Where do you feel you could use professional consulting services related to use of FMPs for planning?

( ) Organizational structure

( ) Customization

( ) Installation

( ) Support

Comments:

24. Do you have any specific thoughts or advice to give a company contemplating offering comprehensive computer assisted planning services to your industry?

Comments: